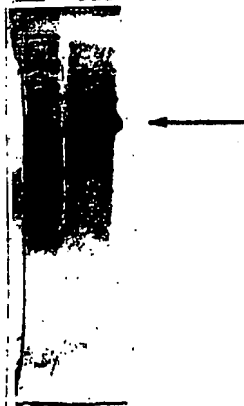


FIG. 1A

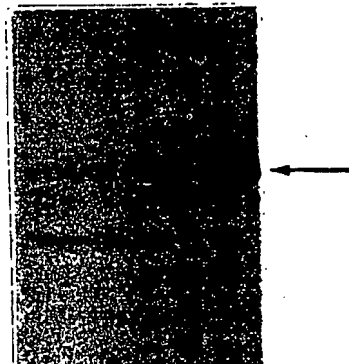
919 (46 kDa)

PURIFICATION

M1 919

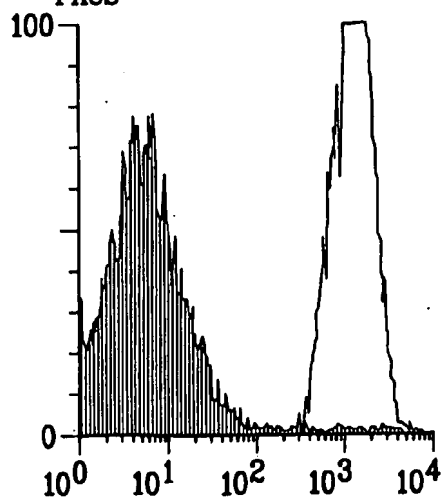
*FIG. 1B*

919 (46 kDa)

WESTERN BLOT
OMV TP PP*FIG. 1C*

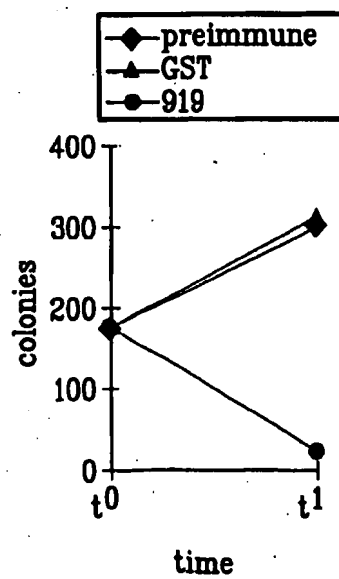
919 (46 kDa)

FACS

*FIG. 1D*

919 (46 kDa)

BACTERICIDAL ASSAY

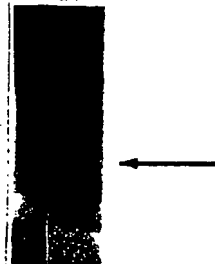
*FIG. 1E*

919 (46 kDa)

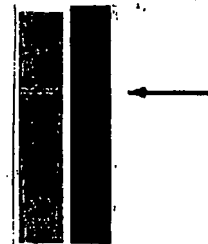
ELISA assay: positive

FIG. 2A

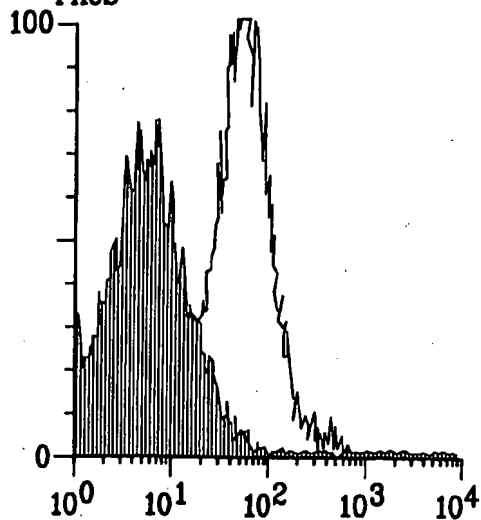
279 (10.5 kDa)
PURIFICATION
M1 279

*FIG. 2B*

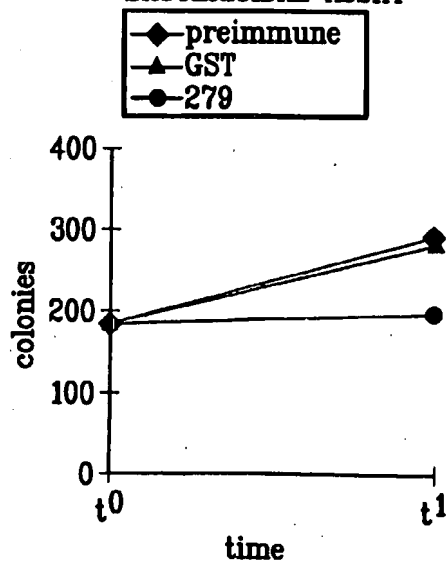
279 (10.5 kDa)
WESTERN BLOT
TP OMV

*FIG. 2C*

279 (10.5 kDa)
FACS

*FIG. 2D*

279 (10.5 kDa)
BACTERICIDAL ASSAY

*FIG. 2E*

279 (10.5 kDa)

ELISA assay: positive

FIG. 3A

576 (27.8 kDa)
PURIFICATION
M1 576



FIG. 3B

576 (27.8 kDa)
WESTERN BLOT
TP OMV

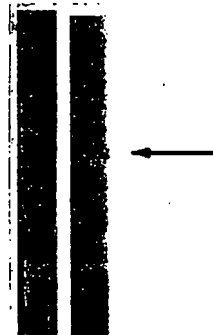


FIG. 3C

576 (27.8 kDa)
FACS

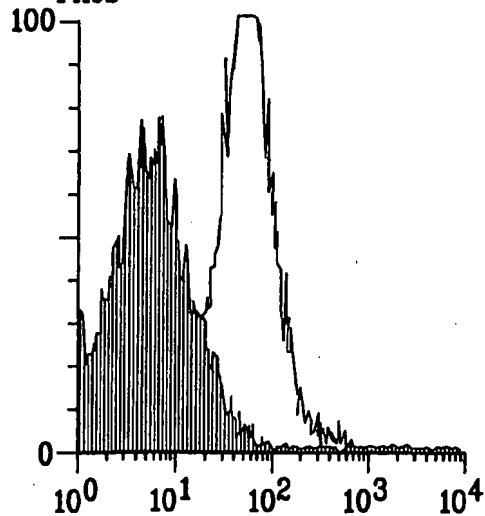


FIG. 3D

576 (27.8 kDa)
BACTERICIDAL ASSAY

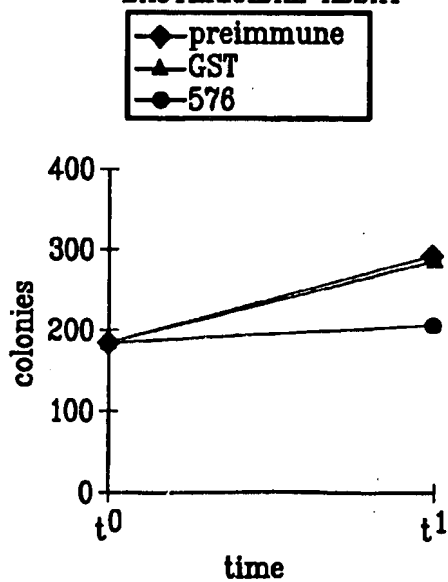


FIG. 3E

576 (27.8 kDa)
ELISA assay: positive

FIG. 4A

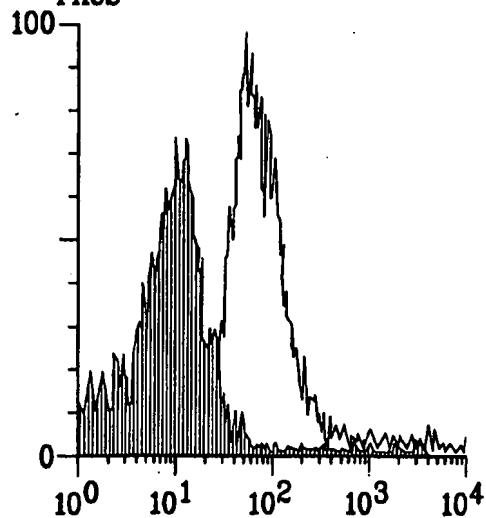
519 (33 kDa)
PURIFICATION
M1 519

*FIG. 4B*

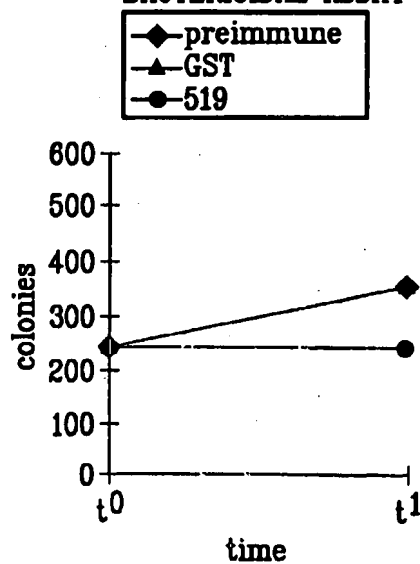
519 (33 kDa)
WESTERN BLOT
TP OMV

*FIG. 4C*

519 (33 kDa)
FACS

*FIG. 4D*

519 (33 kDa)
BACTERICIDAL ASSAY

*FIG. 4E*

519 (33 kDa)
ELISA assay: positive

FIG. 5A

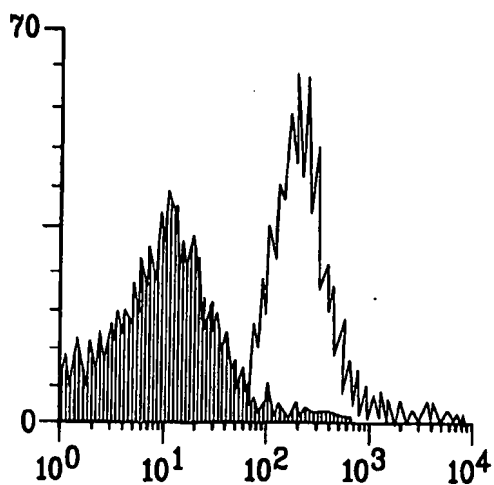
121 (40 kDa)
PURIFICATION
M1 121

*FIG. 5B*

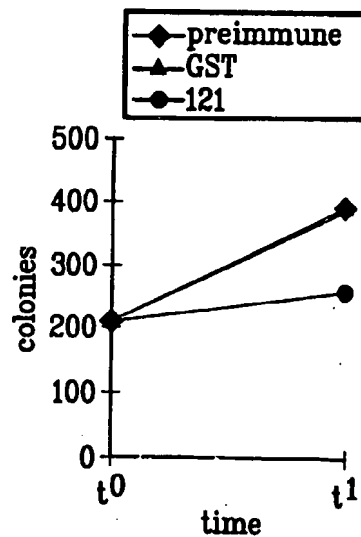
121 (40 kDa)
WESTERN BLOT
TP OMV

*FIG. 5C*

121 (40 kDa)
FACS

*FIG. 5D*

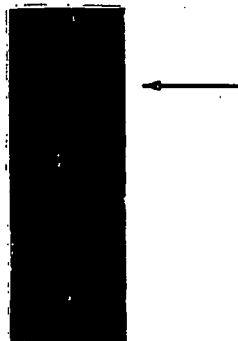
121 (40 kDa)
BACTERICIDAL ASSAY

*FIG. 5E*

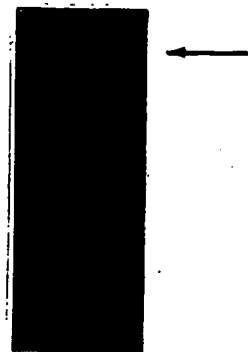
121 (40 kDa)
ELISA assay: positive

FIG. 6A

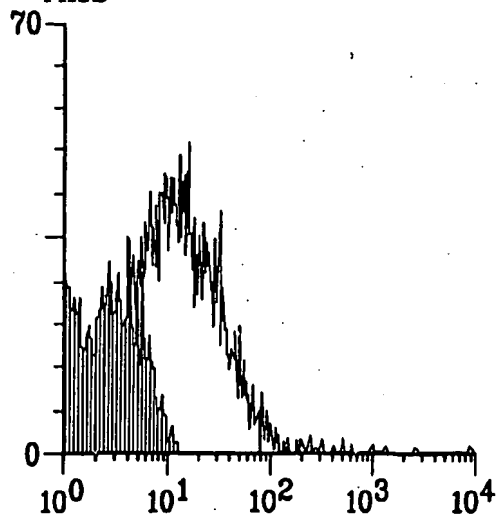
128 (101 kDa)
PURIFICATION
M1 128

*FIG. 6B*

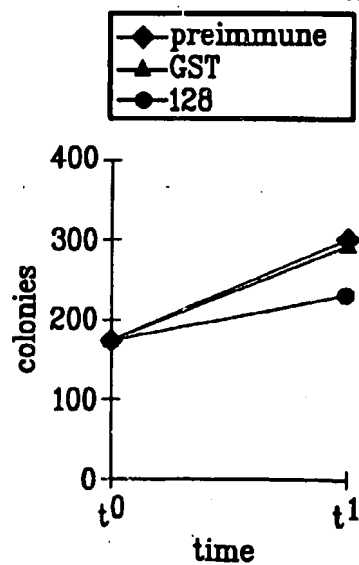
128 (101 kDa)
WESTERN BLOT
TP OMV

*FIG. 6C*

128 (101 kDa)
FACS

*FIG. 6D*

128 (101 kDa)
BACTERICIDAL ASSAY

*FIG. 6E*

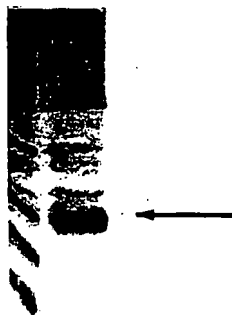
128 (101 kDa)
ELISA assay: positive

FIG. 7A

206 (17 kDa)

PURIFICATION

M1 206

*FIG. 7B*

206 (17 kDa)

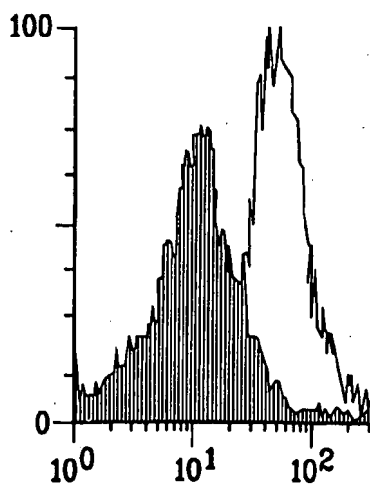
WESTERN BLOT

TP OMV

*FIG. 7C*

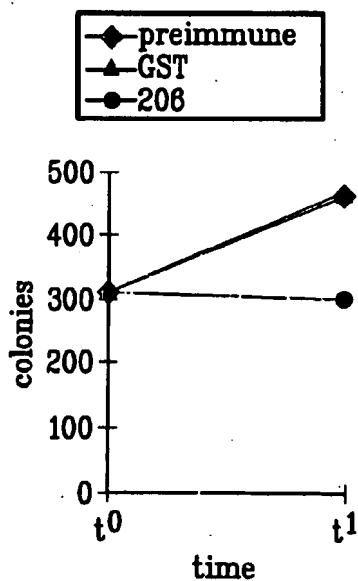
206 (17 kDa)

FACS

*FIG. 7D*

206 (17 kDa)

BACTERICIDAL ASSAY

*FIG. 7E*

206 (17 kDa)

ELISA assay: positive

FIG. 8A

287 (78 kDa)

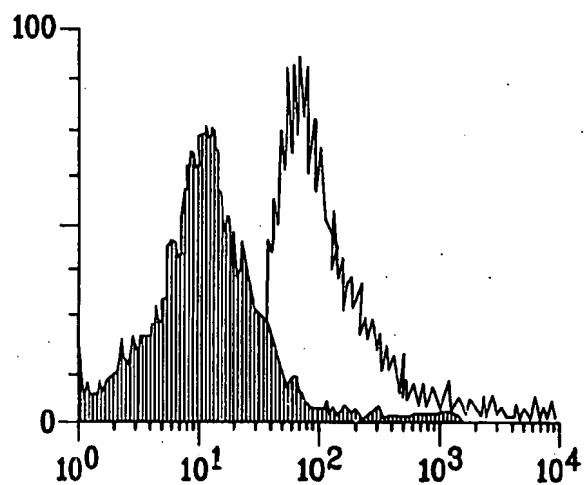
PURIFICATION

M1 287

*FIG. 8B*

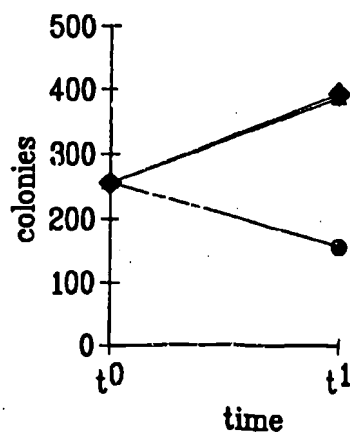
287 (78 kDa)

FACS

*FIG. 8C*

287 (78 kDa)

BACTERICIDAL ASSAY

*FIG. 8D*

287 (78 kDa)

ELISA assay: positive

FIG. 9A
406 (33 kDa)
PURIFICATION
M1 406

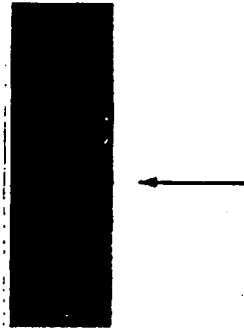


FIG. 9B
406 (33 kDa)
WESTERN BLOT
TP OMV

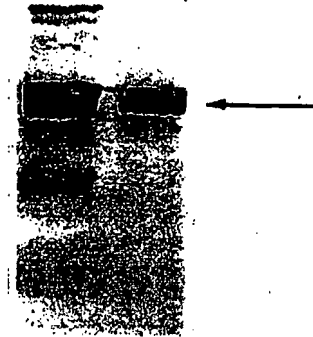


FIG. 9C
406 (33 kDa)
FACS

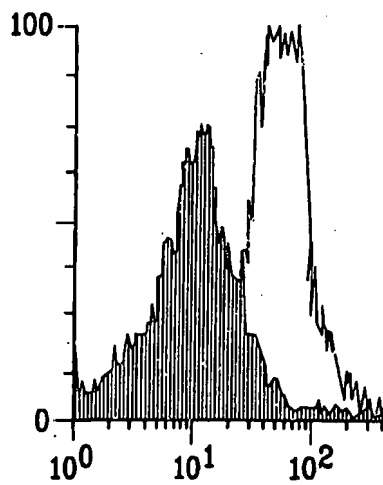


FIG. 9D
406 (33 kDa)
BACTERICIDAL ASSAY

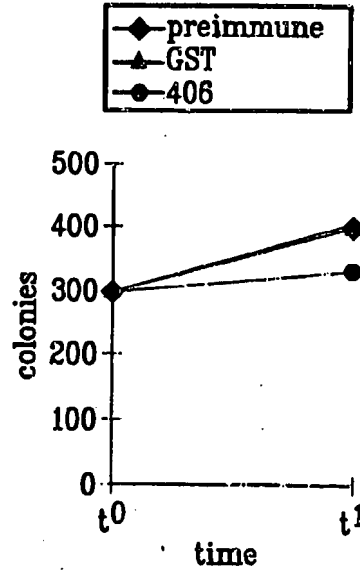


FIG. 9E
406 (33 kDa)
ELISA assay: positive

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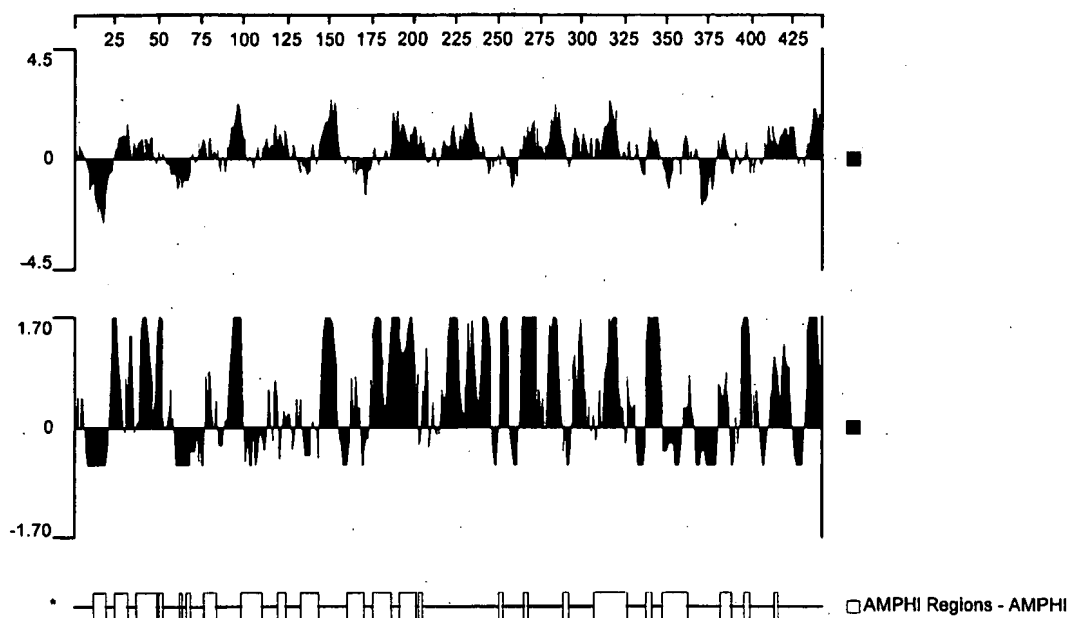
919Hydrophilicity Plot, Antigenic Index and AMPHI Regions

Fig. 10

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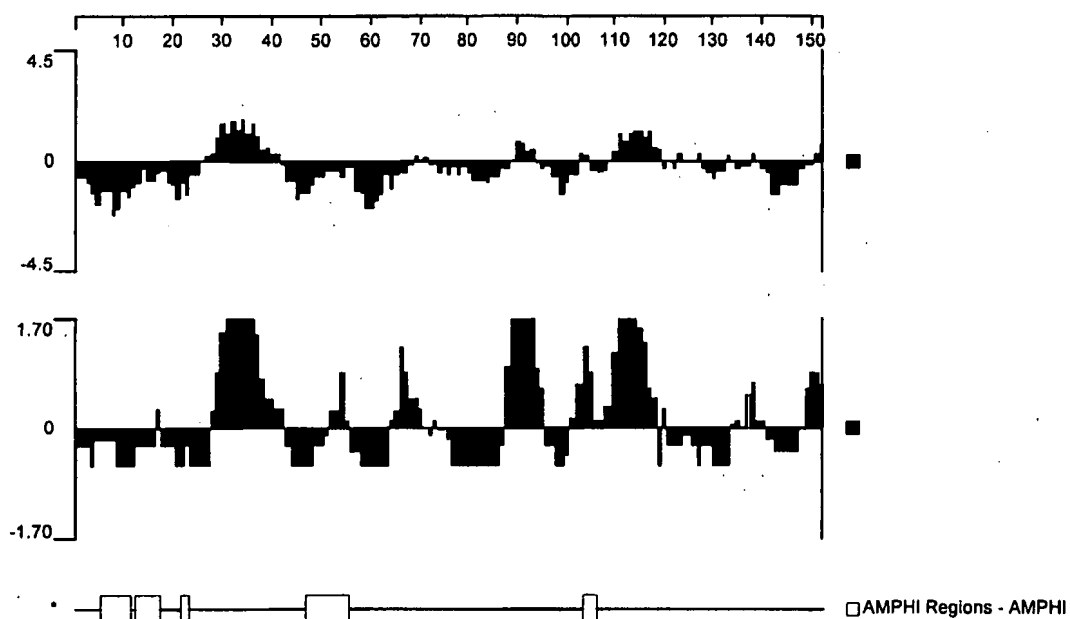
279Hydrophilicity Plot, Antigenic Index and AMPHI Regions

Fig. 11

576-1
Hydrophilicity Plot, Antigenic Index and AMPHI Regions

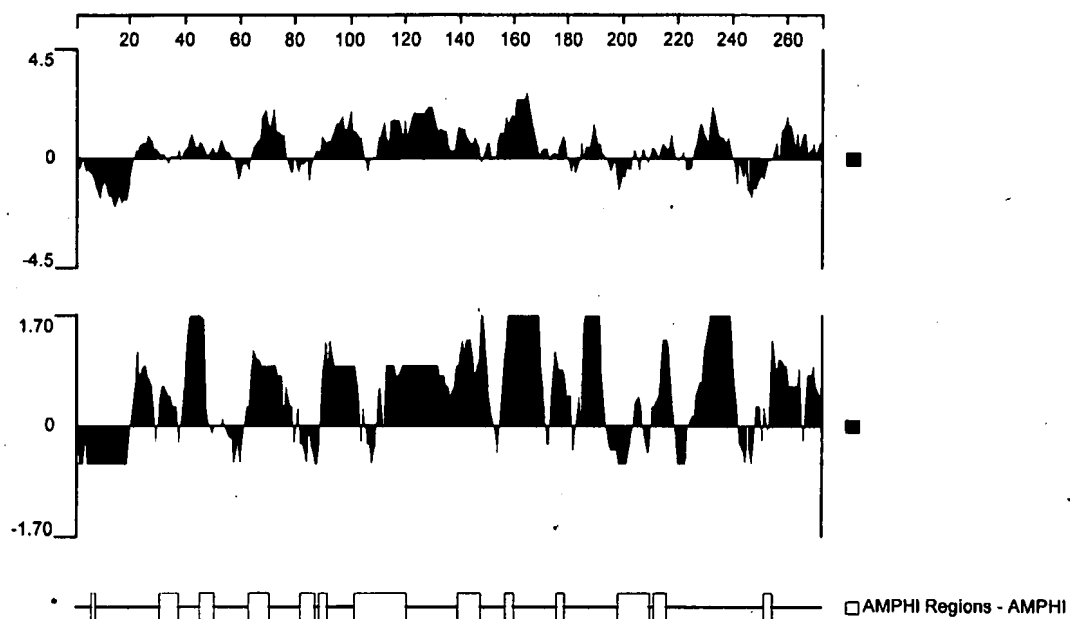


Fig. 12

519-1
Hydrophilicity Plot, Antigenic Index and AMPHI Regions

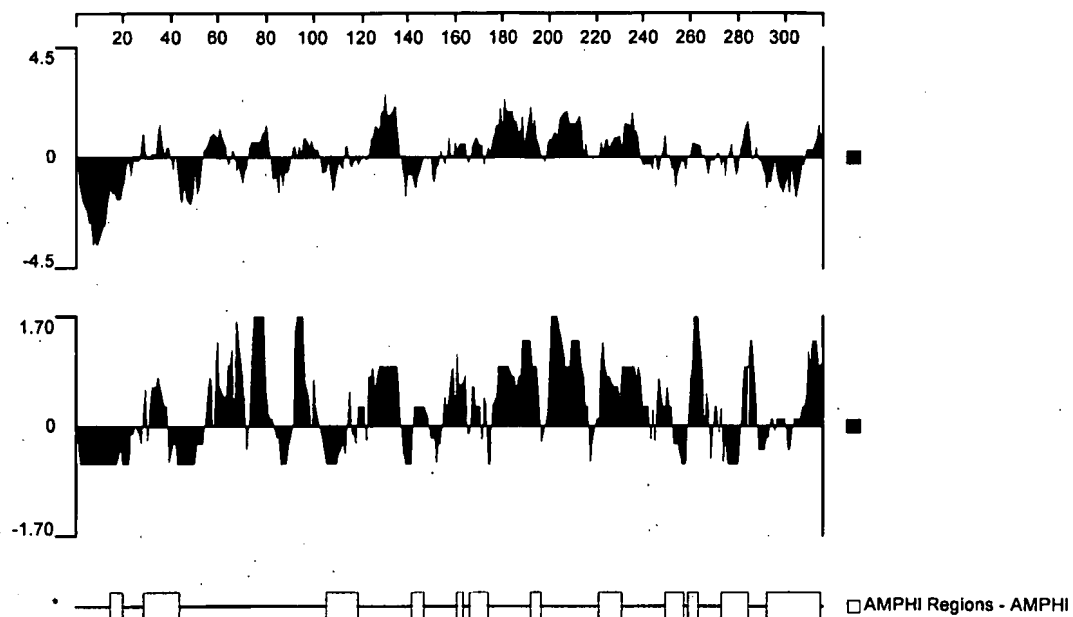


Fig. 13

121-1
Hydrophilicity Plot, Antigenic Index and AMPHI Regions

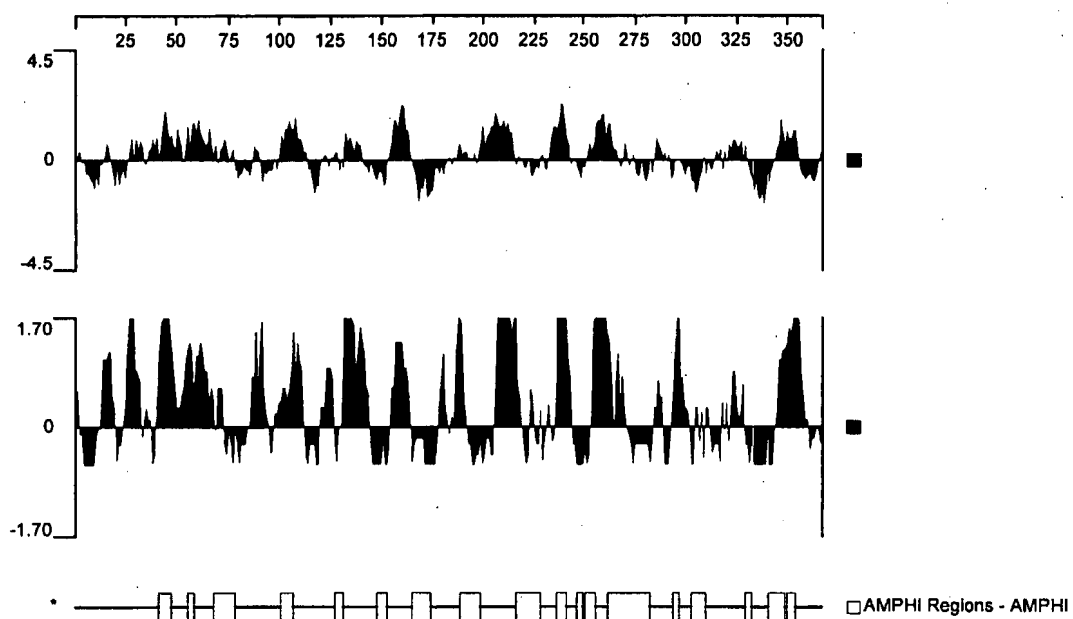


Fig. 14

128-1
Hydrophilicity Plot, Antigenic Index and AMPHI Regions

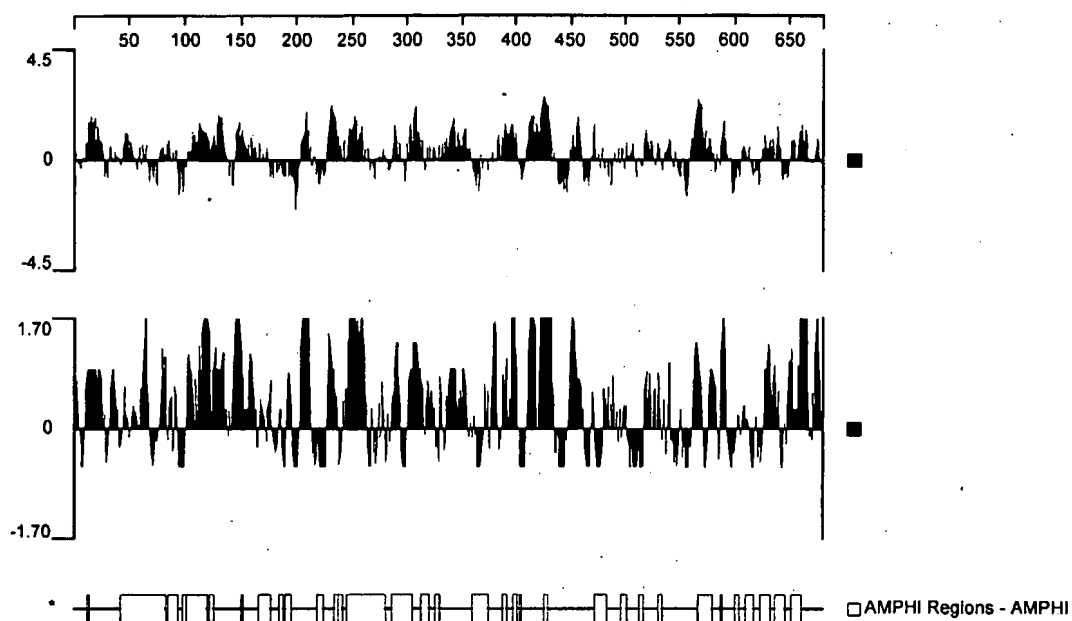


Fig. 15

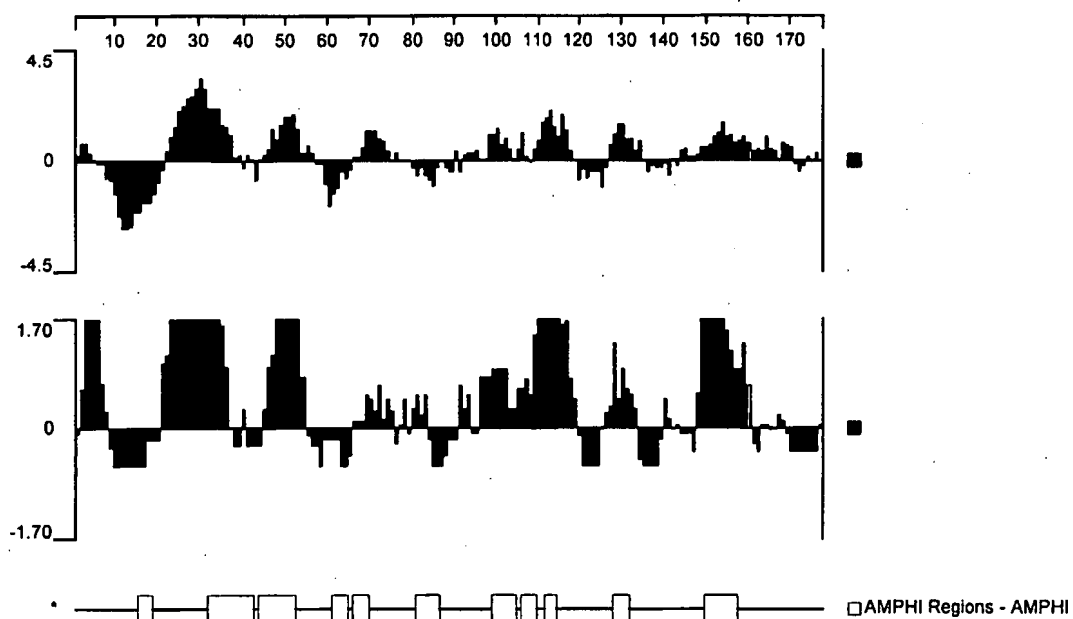
206Hydrophilicity Plot, Antigenic Index and AMPHI Regions

Fig. 16

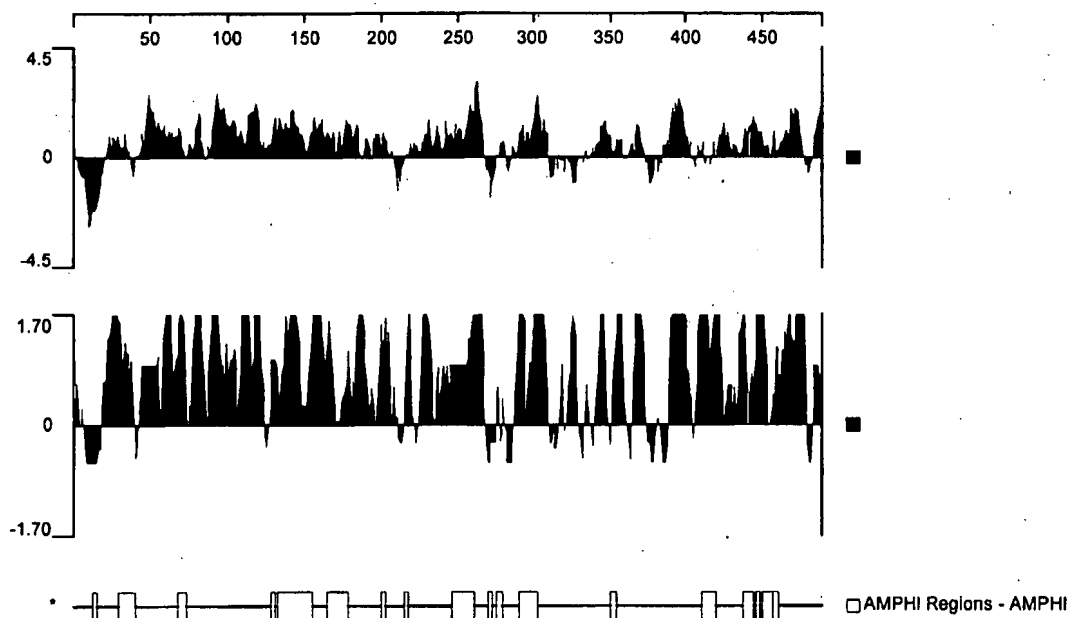
287**Hydrophilicity Plot, Antigenic Index and AMPHI Regions**

Fig. 17

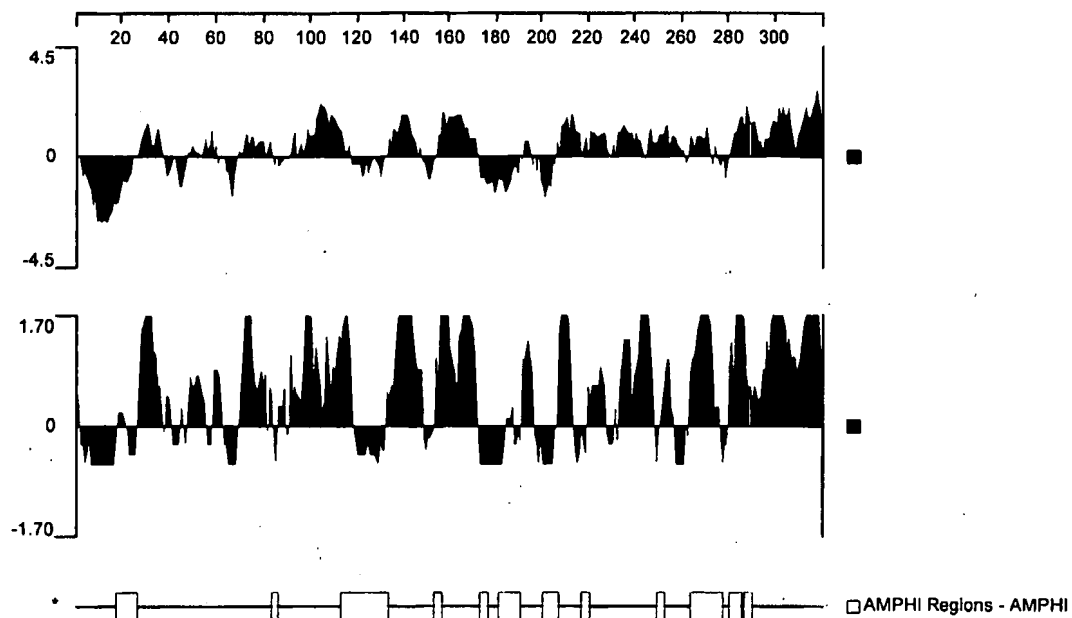
406**Hydrophilicity Plot, Antigenic Index and AMPHI Regions**

Fig. 18

zo05_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo08_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
z2491	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo11_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo20_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo01_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo09_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo12_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo22_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo23_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo24_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo25_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo26_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo96_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo02_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo04_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo06_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo07_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo10_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo14_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo16_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo17_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo18_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo19_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo21_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo27_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo28_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo29_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo13_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo03_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo15_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
fa1090	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo32_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo33_225	1	MDSFFKPAVWAVLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo05_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo08_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
z2491	61	NADELIGSAMGLNEQPVLVPNRRVPARRAGNADELIGNAMGLNEQPVLVPNRRVPARRAGNA
zo11_225	61	NADELIGSAMGLNEQPVLVPNRRVPARRAGNADELIGNAMGLNEQPVLVPNRRVPARRAGNA
zo20_225	61	NADELIGSAMGLNEQPVLVPINRAPARRAGNADELIGSAMGLNEQPVLVPNRRVPARRAGNA
zo01_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo09_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo12_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo22_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo23_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo24_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo25_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo26_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo96_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo02_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo04_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo06_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo07_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo10_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo14_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo16_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo17_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo18_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo19_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo21_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo27_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo28_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo29_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo13_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo03_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo15_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
fa1090	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo32_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA
zo33_225	61	NADELIGSAMGLNE.....QPVLVPNRRVPARRAGNA

FIG. 19A

SUBSTITUTE SHEET (RULE 26)

zo05_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo08_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
z2491	241	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo11_225	241	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo20_225	241	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo01_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo09_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo12_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo22_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo23_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo24_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo25_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo26_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo96_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo02_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo04_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo06_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo07_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo10_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo14_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo16_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo17_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo18_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo19_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo21_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo27_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo28_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo29_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo13_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo03_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo15_225	183	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
fa1090	183	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo32_225	183	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo33_225	183	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*

Fig. 19C

gnmzq09	121	YQILDSVTTVSAKARLVD	SRNGKVLWSGSASIREGSNNNSG	LGLGALVS	SAVVNQIANS	SLT
gnmzq31	121	YQILDSVTTVSAKARLVD	SRNGKVLWSGSASIREGSNNNSG	LGLGALVS	SAVVNQIANS	SLT
fa1090	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq32	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq33	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq01	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIAN	NLT
gnmzq05	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIAN	NLT
gnmzq08	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIAN	NLT
gnmzq02	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq03	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq04	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq07	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq10	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq11	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq13	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq15	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq16	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq17	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq19	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq21	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq22	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq23	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq24	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq25	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq27	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq28	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq29	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
z2491	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq14	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq18	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq26	121	YQILDSVTTVSAKARLVD	SRNGKELWSGSASIREGSNNNSG	LGLGALV	SAVVNQIANS	SLT
gnmzq09	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq31	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
fa1090	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq32	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq33	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq01	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq05	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq08	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq02	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq03	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq04	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq07	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq10	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq11	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq13	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq15	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq16	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq17	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq19	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq21	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq22	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq23	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq24	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq25	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq27	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq28	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq29	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
z2491	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq14	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq18	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		
gnmzq26	181	DRGYQVSKTAAYNLLSPY	SHNGILKGPRFV	EEQPK*		

FIG. 20B

287_14 1 MFKRSVIAMACIFALSACGGGGGGSPDVKSADTLSKPAAPVVSE.....KTEEA
287_2 1 MFKRSVIAMACIFALSACGGGGGGSPDVKSADTLSKPAAPVVSE.....KTEEA
287_21 1 MFKRSVIAMACIFALSACGGGGGGSPDVKSADTLSKPAAPVVSE.....KTEEA
z2491 1 MFKRSVIAMACIFALSACGGGGGGSPDVKSADTLSKPAAPVVSE.....KTEEA
287_9 1 MFKRSVIAMACIFALSACGGGGGGSPDVKSADTLSKPAAPVVSE.....KTEEA
fa1090 1 MFKRSVIAMACIFALSACGGGGGGSPDVKSADTLSKPAAPVVSE.....KTEEA

287_14 50 KEDAPQAGSQGGGAPSAQGGQDMAAVSEENTGNGGAAATDKPKNEDEGAQNDMPQNAADT
287_2 50 KEDAPQAGSQGGGAPSAQGGQDMAAVSEENTGNGGAAATDKPKNEDEGAQNDMPQNAADT
287_21 50 KEDAPQAGSQGGGAPSAQGGQDMAAVSEENTGNGGAAATDKPKNEDEGAQNDMPQNAADT
z2491 50 KEDAPQAGSQGGGAPSAQGGQDMAAVSEENTGNGGAAATDKPKNEDEGAQNDMPQNAADT
287_9 61 VSGAPQADT...QDATAGKGGQDMAAVSAENTGNGGAAATDMPKNEDEGAQNDMPQNAADT
fa1090 61 AGGAPQADT...QDATAGKGGQDMAAVSAENTGNGGAAATDMPKNEDEGAQNDMPQNAADT

287_14 110 DSLTPNHTPASNMPAGNMENQAPDAGESEOPANQPDMAANTADGMQGGDDPSAGGENAGNTA
287_2 110 DSLTPNHTPASNMPAGNMENQAPDAGESEOPANQPDMAANTADGMQGGDDPSAGGENAGNTA
287_21 110 DSLTPNHTPASNMPAGNMENQAPDAGESEOPANQPDMAANTADGMQGGDDPSAGGENAGNTA
z2491 110 DSLTPNHTPASNMPAGNMENQAPDAGESEOPANQPDMAANTADGMQGGDDPSAGGENAGNTA
287_9 119 DSLTPNHTPASNMPTRDMGNQAPDAGESEOPANQPDMAANTADGMQGGDDPSAGGENAGNTA
fa1090 117

287_14 170 AOGTNOAENNQTAGSQNPASSNPSATNSGGDFGRTNVGNVVIDGPSQNTLTHCKGDS
287_2 170 AOGTNOAENNQTAGSQNPASSNPSATNSGGDFGRTNVGNVVIDGPSQNTLTHCKGDS
287_21 170 AOGTNOAENNQTAGSQNPASSNPSATNSGGDFGRTNVGNVVIDGPSQNTLTHCKGDS
z2491 170 AOGTNOAENNQTAGSQNPASSNPSATNSGGDFGRTNVGNVVIDGPSQNTLTHCKGDS
287_9 178 DQANQOAGNNQAGSSDPIPAENPAPANGGSNFGFVDFANGVVIDGPSQNTLTHCKGDS
fa1090 117 .ESANQTCNNQAGSSDSAPASNPAPANGGSNFGFVDFANGVVIDGPSQNTLTHCKGDS

287_14 230 CSGNNFLDEEVOLKSEFEKLSDAKISNYKKDGKNDGKNDKFEVGLVADSVMKGINQYII
287_2 230 CSGNNFLDEEVOLKSEFEKLSDAKISNYKKDGKNDGKNDKFEVGLVADSVMKGINQYII
287_21 230 CSGNNFLDEEVOLKSEFEKLSDAKISNYKK...DGKNDKFEVGLVADSVMKGINQYII
z2491 230 CSGNNFLDEEVOLKSEFEKLSDAKISNYKK...DGKNDKFEVGLVADSVMKGINQYII
287_9 238 CDRD.FLDEEAPPKSEFEKLSDEEKIKRYKK...DEQRENFEVGLVADRVKKGDTNRYII
fa1090 176 CNGDNLDEEAPSKSEFEKLSDEEKIKRYKK...DEQRENFEVGLVADRVKKGDTNRYII

287_14 290 FYKPKP...SFARFRSARSRRSLPAEMPLIPVNQADTLIVDGEAVSLTGHSGNIFAPEG
287_2 290 FYKPKP...SFARFRSARSRRSLPAEMPLIPVNQADTLIVDGEAVSLTGHSGNIFAPEG
287_21 286 FYKPKP...SFARFRSARSRRSLPAEMPLIPVNQADTLIVDGEAVSLTGHSGNIFAPEG
z2491 286 FYKPKP...SFARFRSARSRRSLPAEMPLIPVNQADTLIVDGEAVSLTGHSGNIFAPEG
287_9 293 IYKDKSASSSSARFRSARSRRSLPAEMPLIPVNQADTLIVDGEAVSLTGHSGNIFAPEG
fa1090 232 FYTDKPTT.....RSARSRRSLPAEMPLIPVNQADTLIVDGEAVSLTGHSGNIFAPEG

287_14 348 NYRYLTYGAEKLPGGSYALRVQGEPSKGEMLAGTAVYNGEVLHFHTENGSRPSEGRGFAA
287_2 348 NYRYLTYGAEKLPGGSYALRVQGEPSKGEMLAGTAVYNGEVLHFHTENGSRPSEGRGFAA
287_21 344 NYRYLTYGAEKLPGGSYALRVQGEPAKGEMLAGTAVYNGEVLHFHTENGSRPSEGRGFAA
z2491 344 NYRYLTYGAEKLPGGSYALRVQGEPAKGEMLAGTAVYNGEVLHFHTENGSRPSEGRGFAA
287_9 353 NYRYLTYGAEKLPGGSYALRVQGEPAKGEMLAGTAVYNGEVLHFHTENGSRPSEGRGFAA
fa1090 285 NYRYLTYGAEKLPGGSYALRVQGEPAKGEMLAGTAVYNGEVLHFHTENGSRPSEGRGFAA

287_14 408 KVDFGSKSVDGIIDSGDLHMGTOQKFAAIDGNGFKGTWTENGSGDVSGFYGPAGEEVA
287_2 408 KVDFGSKSVDGIIDSGDLHMGTOQKFAAIDGNGFKGTWTENGSGDVSGFYGPAGEEVA
287_21 404 KVDFGSKSVDGIIDSGDLHMGTOQKFAAIDGNGFKGTWTENGSGDVSGFYGPAGEEVA
z2491 404 KVDFGSKSVDGIIDSGDLHMGTOQKFAAIDGNGFKGTWTENGSGDVSGFYGPAGEEVA
287_9 413 KVDFGSKSVDGIIDSGDLHMGTOQKFAAIDGNGFKGTWTENGSGDVSGFYGPAGEEVA
fa1090 345 KVDFGSKSVDGIIDSGDLHMGTOQKFAAIDGNGFKGTWTENGSGDVSGFYGPAGEEVA

FIG. 21A

287_14	468	GKYSYRPTDAEKGGFGVFAGKKEQD*
287_2	468	GKYSYRPTDAEKGGFGVFAGKKEQD*
287_21	464	GKYSYRPTDAEKGGFGVFAGKKEQD*
z2491	464	GKYSYRPTDAEKGGFGVFAGKKEQD*
287_9	473	GKYSYRPTDAEKGGFGVFAGKKEQD*
fa1090	405	GKYSYRPTDAEKGGFGVFAGKKRD*

FIG. 21B

z2491_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv26_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv22_519 _{ass}	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
fa1090_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv32_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv11_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv28_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv96_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv02_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv03_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv04_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv05_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv01_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv07_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv12_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv18_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv19_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv21_519 _{ass}	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv27_519	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv20_519 _{ass}	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv06_519 _{ass}	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL
zv29_519 _{ass}	1	MEFFIILLAAVVVFGFKSFVVIPQQEVHVVERLGRFHRALTAGLNILIPFIDRVAYRHSL

z2491_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv26_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv22_519 _{ass}	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
fa1090_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv32_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv11_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv28_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv96_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv02_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv03_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv04_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv05_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv01_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv07_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv12_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv18_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv19_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv21_519 _{ass}	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv27_519	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv20_519 _{ass}	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv06_519 _{ass}	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG
zv29_519 _{ass}	61	KEIPLDVP SQVCITRDNTQLTV DGIIFYQVTD PKLASYGSSNYIMAITQLAQTTLRSVIG

z2491_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv26_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv22_519 _{ass}	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
fa1090_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv32_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv11_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv28_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv96_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv02_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv03_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv04_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv05_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv01_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv07_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv12_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv18_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv19_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv21_519 _{ass}	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv27_519	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv20_519 _{ass}	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv06_519 _{ass}	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE
zv29_519 _{ass}	121	RMELDKTFEERDEINSTVVSALDEAAGAWGVKVLRYEIKDLVPPQEILRSMQAQITAERE

FIG. 22A

z2491_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv26_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv22_519 ^{ass}	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
fa1090_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv32_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv11_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv28_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv96_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv02_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv03_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv04_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv05_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv01_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv07_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv12_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv18_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv19_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv21_519 ^{ass}	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv27_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv20_519 ^{ass}	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv06_519 ^{ass}	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv29_519 ^{ass}	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR

z2491_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv26_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv22_519 ^{ass}	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
fa1090_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv32_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv11_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv28_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv96_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv02_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv03_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv04_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv05_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv01_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv07_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv12_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv18_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv19_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv21_519 ^{ass}	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv27_519	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv20_519 ^{ass}	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv06_519 ^{ass}	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv29_519 ^{ass}	241	LVAEANAIAIRQIAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL

z2491_519	301	ISAGMKIIDSSKTAK*
zv26_519	301	ISAGMKIIDSSKTAK*
zv22_519 ^{ass}	301	ISAGMKIIDSSKTAK*
fa1090_519	301	ISAGMKIIDSSKTAK*
zv32_519	301	ISAGMKIIDSSKTAK*
zv11_519	301	ISAGMKIIDSSKTAK*
zv28_519	301	ISAGMKIIDSSKTAK*
zv96_519	301	ISAGMKIIDSSKTAK*
zv02_519	301	ISAGMKIIDSSKTAK*
zv03_519	301	ISAGMKIIDSSKTAK*
zv04_519	301	ISAGMKIIDSSKTAK*
zv05_519	301	ISAGMKIIDSSKTAK*
zv01_519	301	ISAGMKIIDSSKTAK*
zv07_519	301	ISAGMKIIDSSKTAK*
zv12_519	301	ISAGMKIIDSSKTAK*
zv18_519	301	ISAGMKIIDSSKTAK*
zv19_519	301	ISAGMKIIDSSKTAK*
zv21_519 ^{ass}	301	ISAGMKIIDSSKTAK*
zv27_519	301	ISAGMKIIDSSKTAK*
zv20_519 ^{ass}	301	ISAGMKIIDSSKTAK*
zv06_519 ^{ass}	301	ISAGMKIIDSSKTAK*
zv29_519 ^{ass}	301	ISAGMKIIDSSKTAK*

FIG. 22B

SUBSTITUTE SHEET (RULE 26)

FIG. 23B

SUBSTITUTE SHEET (RULE 26)

fa1090	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm33asbc	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm32asbc	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm23asbc	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm27bc	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm09	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm10	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm24	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm25	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm14	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm04	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm11asbc	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm08n	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm96	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm01	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm02	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm03	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm07	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm12	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm18	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm19	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm20	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm21	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm06	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm17	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm13	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm05	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
z2491	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm22	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm26	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm28	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm29asbc	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm16	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm15	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm31asbc	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK

fa1090	421	QKTTGYVWQLLPNGMKPEYRP*
zm33asbc	421	QKTTGYVWQLLPNGMKPEYRP*
zm32asbc	421	QKTTGYVWQLLPNGMKPEYRP*
zm23asbc	421	QKTTGYVWQLLPNGMKPEYRP*
zm27bc	421	QKTTGYVWQLLPNGMKPEYRP*
zm09	421	QKTTGYVWQLLPNGMKPEYRP*
zm10	421	QKTTGYVWQLLPNGMKPEYRP*
zm24	421	QKTTGYVWQLLPNGMKPEYRP*
zm25	421	QKTTGYVWQLLPNGMKPEYRP*
zm14	421	QKTTGYVWQLLPNGMKPEYRP*
zm04	421	QKTTGYVWQLLPNGMKPEYRP*
zm11asbc	421	QKTTGYVWQLLPNGMKPEYRP*
zm08n	421	QKTTGYVWQLLPNGMKPEYRP*
zm96	421	QKTTGYVWQLLPNGMKPEYRP*
zm01	421	QKTTGYVWQLLPNGMKPEYRP*
zm02	421	QKTTGYVWQLLPNGMKPEYRP*
zm03	421	QKTTGYVWQLLPNGMKPEYRP*
zm07	421	QKTTGYVWQLLPNGMKPEYRP*
zm12	421	QKTTGYVWQLLPNGMKPEYRP*
zm18	421	QKTTGYVWQLLPNGMKPEYRP*
zm19	421	QKTTGYVWQLLPNGMKPEYRP*
zm20	421	QKTTGYVWQLLPNGMKPEYRP*
zm21	421	QKTTGYVWQLLPNGMKPEYRP*
zm06	421	QKTTGYVWQLLPNGMKPEYRP*
zm17	421	QKTTGYVWQLLPNGMKPEYRP*
zm13	421	QKTTGYVWQLLPNGMKPEYRP*
zm05	421	QKTTGYVWQLLPNGMKPEYRP*
z2491	421	QKTTGYVWQLLPNGMKPEYRP*
zm22	421	QKTTGYVWQLLPNGMKPEYRP*
zm26	421	QKTTGYVWQLLPNGMKPEYRP*
zm28	421	QKTTGYVWQLLPNGMKPEYRP*
zm29asbc	421	QKTTGYVWQLLPNGMKPEYRP*
zm16	421	QKTTGYVWQLLPNGMKPEYRP*
zm15	421	QKTTGYVWQLLPNGMKPEYRP*
zm31asbc	421	QKTTGYVWQLLPNGMKPEYRP*

FIG. 23D